CDF Operations Report

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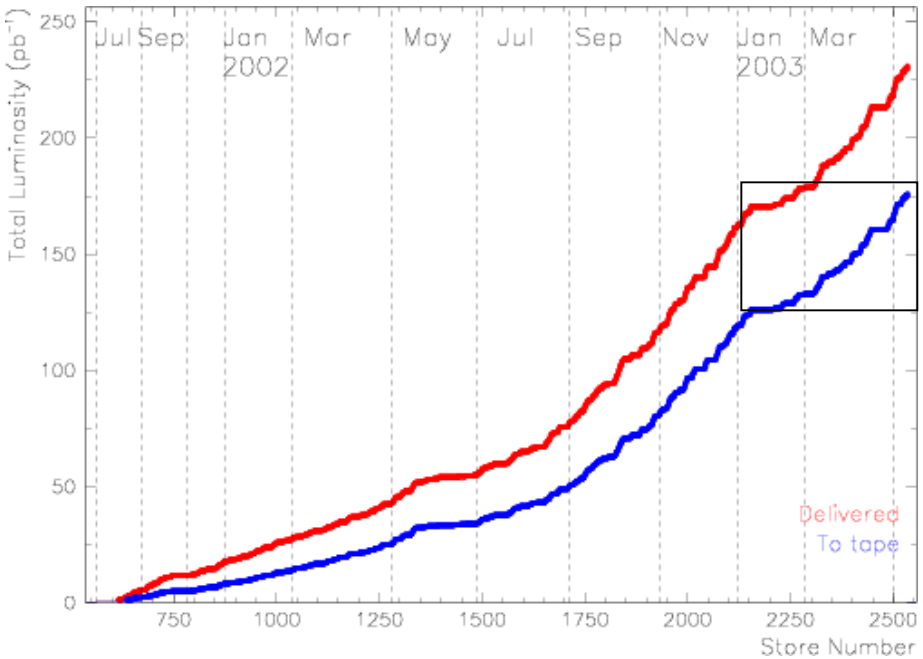
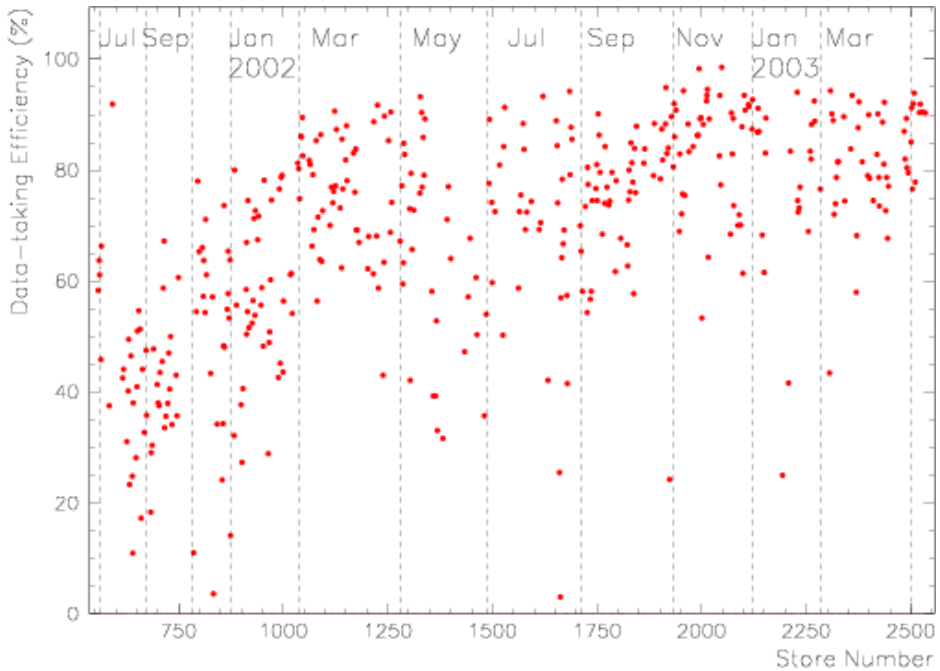
All Experimenters' Meeting

Stores summary

Date	Store	Duration (h)	Inst Lum (initial)	Int Lum (delivered)	Int Lum (live)	ε
Su 5/4	2507	16.8	39.0e30	1462.5	1344.9	92.0%
Mo 5/5	2509	16.4	39.6e30	1394.4	1309.4	93.9%
Tu 5/6	2511	4.9	43.8e30	617.2	480.1	77.8%
We 5/7	2521	17.0	41.5e30	1450.9	1311.3	90.4%
Th 5/8	2523	10.0	43.8e30	1074.8	988.0	91.9%
Fr 5/9	2529	13.2	43.6e30	1275.6	1154.2	90.5%
Su 5/11	2536	17.0	31.0e30	1136.2	1036.0	90.3%
Total				8.4 pb^{-1}	7.6 pb^{-1}	90.0%

CDF since January





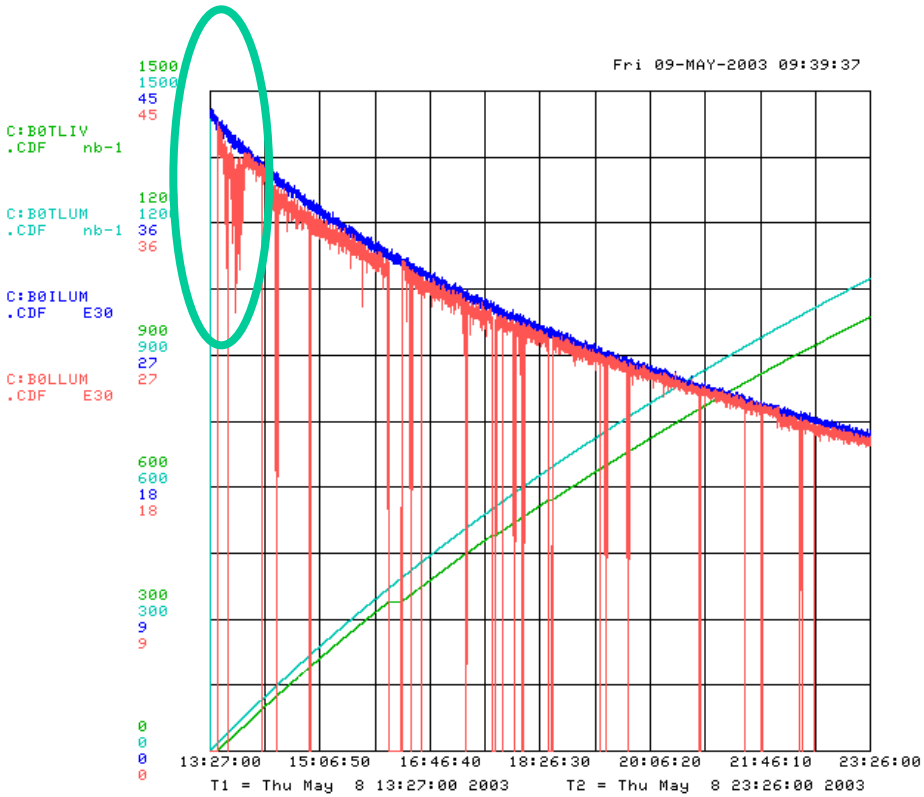
Luminosity

~50 pb^{-1} to tape since January

Efficiency

Getting better all the time!

CDF Issues



- Attention shifting toward "chronic" deadtime issues
- Datalogger bandwidth limit: ~20 MB/s
  - Hitting this limit at the beginning of stores
- Band-aid: prescale some triggers
- Real solution: cut down event rate/size
  - Use Si tracking when cutting on impact parameters at L3
    - Up to a factor of 7 reduction in the biggest L3 bandwidth hogs (B triggers) with less than 5% loss in heavy flavor yield
  - Data compression (factor of ~2)
- Both solutions on near horizon

Other downtime sources

- "Halt-Recover-Runs"
  - Automated, gets DAQ components back in synch
  - ~10 seconds a few times per hour, adds up to 1-2% down time over a store
  - DAQ group making an effort to understand the underlying problem(s)
  - Automatic recovery from more complex errors is in the pipeline

Conclusions

- A good week for both accelerator and CDF
- No accesses requested, but good use made of those that became available
  - Fixed three problematic calorimeter towers
  - Si single-ladder investigations
- 8.4 pb^{-1} delivered and 90% physics data-taking efficiency
- Working to keep it up, and make it better